

IPMobileNet Mobile Radio Firmware Version 32

The instructions below are provided to agencies that install and maintain 700 MHz mobile radios for use on the Utah Mobile Data Network.

It is important you upgrade each mobile unit with this firmware version. It provides many improvements key to good performance on the network.

If you have questions or problems with these instructions, please contact the Office Manager at the ITS Radio Shop (801-965-4535). She will connect you with a person who can assist you.

Preparing to upgrade

1. Please read through the entire instructions prior to beginning the update.
2. Check to see what version the mobile is operating.
 - **If it is running version 14, you must load firmware version 27 before loading version 32. Failing to do so will cause the mobile to malfunction and require returning it to IPMobileNet for repair.**
Firmware Version 27 and instructions are on the product web page.
 - **If the mobile is running any other version, you may proceed to directly load version 32.**
3. Access the ITS web site at www.its.utah.gov.
4. Navigate to the Mobile Data Network product page: Products and Services → Wireless Network Products → Data Products → Mobile Data Network.
Find the Mobile Setup Instructions section on the web page.
5. You need to use the IPMessage program to upgrade mobiles. You may have downloaded this program in the past to perform a previous upgrade. If you do not have this program on the machine from which you will perform the upgrades, download the file.
 - Filename: IpMsg30.exe
6. Download Firmware Version 32 to the machine from which you will perform the upgrades.
 - Filename: m3501.000.032.bin
7. Turn off Windows Firewall before proceeding.

Instructions to upgrade to firmware version 32

Important Notes:

- **Perform the firmware upgrade using a direct cable connection. Do not attempt to upgrade over the air.**
 - **During the firmware upgrade, do not re-boot or disconnect or cycle power on the mobile. This will damage the mobile unit, requiring it to be shipped to the factory for repair.**
1. Connect to the mobile radio using an Ethernet or serial (for SLIP connections) cable.
 2. Open IP Message and verify that you have a connection between your PC and the mobile.
 - To do this, enter the IP address of the mobile radio to which you are connected in the bottom left corner of the IP Message program screen.
 - If you do not know the address, you can enter 255.255.255.255 and press Enter.

- This will move the cursor to the next field where you should enter “?”.
 - The IP address of the radio to which you are connected will be at the beginning of each line.
 - Enter that IP address in the bottom left corner of the IP Message program screen.
3. Unlock the radio using the command **unlock = INVADR**.
 4. From the IP Message “File” menu, select “Firmware/EEPROM Update.”
 - A browser window displays.
 - Browse to where you saved the Version 32 file on your PC.
 - When you click the "Open" button the radio automatically begins upgrading the firmware.
 5. When the firmware update is complete the radio automatically installs the firmware and reboots.

Steps to follow after completing the upgrade

- The commands below are required to update each mobile with the latest default parameters.
 - The commands, with the exception of the first (Unlock), are not case sensitive. Capitalization and spaces do not matter.
 - Once a command is entered it is auto-saved.
 - It is critical that the commands are entered exactly as specified for the mobile to operate on the Mobile Data Network.
 - Once the radio is unlocked (first command) it stays unlocked for a short period of time. Verify that the radio accepted each command by observing whether the radio echoes back the command just entered.
- Commands:
 - Unlock=Elvis [Note: This command is case sensitive.]
 - seek park time=5000
 - q age=30
 - q threshold=180
 - q weight=10
 - roam lost time=30
 - roam age limit=30
 - rssi dspan=20,50,0,220,60
 - rssi weight=50

This completes the upgrade procedure that should be performed for each mobile radio.